

### ABSTRACT OF THE DISCLOSURE

The present invention provides for a method for reserving spare bandwidth for a link in a communication network including a plurality of links. The method provides for monitoring the volume of traffic routed through each link of the communication network. A single link failure for each link is then simulated and the volume of traffic which would be rerouted through each link for maintaining communication and the volume of traffic removed from each link are determined for each simulated single link failure. The difference between the volume of traffic which would need to be rerouted through each link and the corresponding volume of traffic removed from each link is then computed, and a maximum difference value is determined for each link for all simulated single link failures. An amount of spare bandwidth equivalent to the determined maximum difference is then reserved for each link.